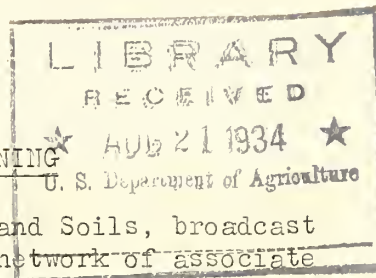


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SAVING SURPLUS PRODUCTS THROUGH SALTING AND BRINING



A radio talk by Harry E. Goresline, Bureau of Chemistry and Soils, broadcast during the Home Demonstration Radio Hour, August 1, 1934, by a network of associate NBC radio stations.

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Salting and brining of surplus food materials as methods of preservation are staging a comeback. There was a time when vegetables were "put down" in brine against the winter, and then for a time canning seemed to take its place. Now the simple, economical methods of salting and brining are coming into vogue once more and should appeal to relief agencies and institutions. These methods are economical because all that is needed are the raw materials, salt and the containers in which to pack them. It sounds easy and it is easy, but certain rules must be followed to insure success.

The preservation of vegetables by salt may be divided into three general methods: 1st, dry salting, in which no fermentation is permitted; 2nd, brining in which fermentation is encouraged; and 3rd, fermentation in low salt concentrations.

In the first method dry salt is added to the vegetables to be preserved. The salt draws the moisture out of the vegetables and a very concentrated brine is obtained. Under these conditions the juice of the vegetables is drawn out, bacterial growth is eliminated, and if properly protected the preserved material will keep for a long period of time. This method should be employed only on vegetables having considerable body, such as string beans, lima beans, corn, etc. If this method is attempted with juicy materials they become tough and leathery.

The second or brine method, is the one most commonly employed commercially and in the home. The resulting product is harder to keep, but a more palatable food will be obtained. Nearly all vegetables and many fruits can be put down in brine. The vegetables or fruits are packed in stone crocks or other containers, and after being weighted down are covered with brine of a definite salt concentration. The brined products should be placed where it is cool and allowed to ferment.

During this fermentation lactic acid is formed from the sugar which was contained in the vegetable, and this, together with the salt, preserves the products. If the material is to be kept for a period of time the top should be protected from the air by oil or paraffin to prevent spoilage. It is for this reason that closed containers are being used more and more for the preservation of brined foods. Experiments carried out in the United States Department of Agriculture have shown that food material can be brined and kept for long periods of time by placing it directly into glass jars of convenient sizes and sealing after the fermentation is complete. The jars should not be sealed at once, since considerable gas is evolved and may burst the container, but should be sealed just as the bubbling subsides. The food which is packed in largest amounts by this method is cucumber pickles, but corn, string beans, green tomatoes, beets, etc. may be successfully preserved. Housewives so often ask, "Why don't my pickles taste like the ones I buy at the Store?"

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This is nearly always traceable to the fact that they are not made by the same process. The cookbook method of soaking cucumbers in brine for a few hours and then heating with vinegar and spices does not make the same kind of pickling that is produced by fermentation in brine.

The third method of preservation is that of fermentation in a low salt concentration and considerable food is packed by this method in the form of sauerkraut. The shredded cabbage is packed with about 2-1/2% salt which would not preserve the product were it not for the lactic acid which is formed by the bacteria during the fermentation. The combination of the salt and the acid produces an excellent flavor, and at the same time keeps the product. This method has recently been successful in the production of sauerkraut from turnips.

Information on the use of these methods can be obtained by writing to the United States Department of Agriculture at Washington, D. C., asking for Farmers' Bulletin 1438 called "Making Fermented Pickles."

Satisfactory results should not be expected under any and all conditions and important points to be remembered in using these methods are: Use good sound raw materials; choose the method to suit the products to be packed, and then pack in quantities that will be used up within a reasonable length of time after the container is opened. Do not expect to keep the brined food too long. Protect the surface of the containers from the air and dust, and keep in a cool place. Do not become discouraged if you do not succeed the first time you try.

We hope you will try salting and brining some of your food products this summer and fall, and we wish you success.

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